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PAPER NUMBER

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

# NOTICE OF ALLOWANCE AND FEE(S) DUE

24319

7590

02/20/2004

LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 LEGAL MILPITAS, CA 95035 EXAMINER
GHYKA, ALEXANDER G

ART UNIT

DATE MAILED: 02/20/2004

APPLICATION NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960 441	09/21/2001	Newell E. Chiesl	01-384	5776

TITLE OF INVENTION: ARRANGEMENT FOR MEASURING PRESSURE ON A SEMICONDUCTOR WAFER AND AN ASSOCIATED METHOD F FABRICATING A SEMICONDUCTOR WAFER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	05/20/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATEN <u>PROSECUTION ON THE MERITS IS CLOSED</u>. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHT THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPO PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM TH MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THE STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOV REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (O AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WIL BE REGARDED AS ABANDONED.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is n claiming SMALL ENTITY status, check the box below and enclo the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
- ☐ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- II. PART B FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) w your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B Fee(s) Transmittal should completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B Fee(s) Transmittal should completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

(703) 746-4000 or Fax

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks I through 4 should be completed wh appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" maintenance fee notifications. CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1) Note: A certificate of mailing can only be used for domestic mailings of Fee(s) Transmittal. This certificate cannot be used for any other accompany papers. Each additional paper, such as an assignment or formal drawing, m have its own certificate of mailing or transmission. 24319 7590 02/20/2004 LSI LOGIC CORPORATION Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the Un States Postal Service with sufficient postage for first class mail in an envel addressed to the Mail Stop ISSUE FEE address above, or being facsim transmitted to the USPTO, on the date indicated below. **1621 BARBER LANE** MS: D-106 LEGAL MILPITAS, CA 95035 (Depositor's na (Signat Œ FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. APPLICATION NO. FILING DATE 01-384 5776 09/960,441 09/21/2001 Newell E. Chiesl TITLE OF INVENTION: ARRANGEMENT FOR MEASURING PRESSURE ON A SEMICONDUCTOR WAFER AND AN ASSOCIATED METHOD F FABRICATING A SEMICONDUCTOR WAFER APPLN, TYPE SMALL ENTITY ISSUE FEE **PUBLICATION FEE** TOTAL FEE(S) DUE DATE DUE NO \$1330 05/20/2004 nonprovisional \$1330 \$0 **EXAMINER** ART UNIT **CLASS-SUBCLASS** 2812 438-050000 GHYKA, ALEXANDER G 1. Change of correspondence address or indication of "Fee Address" (37 2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent ee Address" indication (or "Fee Address" Indication form attorneys or agents. If no name is listed, no name PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. will be printed. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY) Please check the appropriate assignee category or categories (will not be printed on the patent); ☐ individual Corporation or other private group entity ☐ governm 4a. The following fee(s) are enclosed: 4b. Payment of Fee(s): ☐ Issue Fee ☐ A check in the amount of the fee(s) is enclosed. Publication Fee ☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment Deposit Account Number \_\_\_\_\_\_ (enclose an extra copy of this form). ☐ Advance Order - # of Copies (enclose an extra copy of this form). Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. (Authorized Signature) (Date) NOTE; The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office. This collection of information is required by 37 CFR 1.311. The information is required to

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

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APPLICATION N	APPLICATION NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/960,441		09/21/2001	Newell E. Chiesl	01-384	5776	
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LSI LOGIC CORPORATION				GHYKA, ALEXANDER G		
1621 BARBE MS: D-106 I				ART UNIT	PAPER NUMBER	
MILPITAS,	CA 95035	5035		2812		
				DATE MAILED: 02/20/2004	1	

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after t mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a ha months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date th determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retriev (PAIR) system (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

and

	Application No.	Applicant(s)			
	09/960,441	CHIESL, NEWELL E.			
Notice of Allowability	Examiner	Art Unit			
	Alexander G. Ghyka	2812			
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in or other appropriate commu GHTS. This application is s	this application. If not included inication will be mailed in due course. <b>THIS</b>			
1. This communication is responsive to					
2. The allowed claim(s) is/are 17 and 19-28.					
3. $\boxtimes$ The drawings filed on <u>21 September 2001</u> are accepted by	the Examiner.				
4. ☐ Acknowledgment is made of a claim for foreign priority un  a) ☐ All b) ☐ Some* c) ☐ None of the:  1. ☐ Certified copies of the priority documents have	been received.				
2. Certified copies of the priority documents have					
3. Copies of the certified copies of the priority doc	cuments have been received	in this national stage application from the			
International Bureau (PCT Rule 17.2(a)).					
* Certified copies not received:					
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		a reply complying with the requirements			
5. A SUBSTITUTE OATH OR DECLARATION must be submit INFORMAL PATENT APPLICATION (PTO-152) which give					
6. CORRECTED DRAWINGS ( as "replacement sheets") mus	t be submitted.				
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached					
1)  hereto or 2)  to Paper No./Mail Date					
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date					
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).					
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.					
Attachment(s)					
1. Notice of References Cited (PTO-892)	5. Notice of In	formal Patent Application (PTO-152)			
2. Notice of Draftperson's Patent Drawing Review (PTO-948)		ımmary (PTO-413), Mail Date			
3. Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No./Mail Date	·	Amendment/Comment			
4.   Examiner's Comment Regarding Requirement for Deposit		Statement of Reasons for Allowance			
of Biological Material	9. 🗌 Other	-			
		ALEXANDER GHYKA PRIMARY EXAMINER  AU 1813			
U.S. Patent and Trademark Office		all yha			

U.S. Patent and Trademark Office PTOL-37 (Rev. 1-04)

**Notice of Allowability** 

Part of Paper No./Mail Date 0217

### **DETAILED ACTION**

### Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Harold C. Moore on February 16, 2004.

The application has been amended as follows:

Delete Claims 1-16.

In Claim 17, line 7, delete "icruity"

And insert - circuitry --.

In Claim 27, line 1, delete "A method of fabricating a semiconductor wafer,"

And insert - The method of claim 17, further -- .

### Allowable Subject Matter

Claims 17 and 19-28 are allowed.

The following is an examiner's statement of reasons for allowance:

Application/Control Number: 09/960,441

Art Unit: 2812

The closest prior art known to the Examiner is cited in the previous Office Action. Smesny does not teach or suggest measuring pressure with a pressure measurement device that includes a capacitor and a capacitance measurement unit electrically coupled to the capacitor. Smesny instead suggests that sensors may be implemented to measure pressure conditions on a semiconductor, wherein the pressure sensors may comprise transducers that include resistive circuits. Fisher suggests that separately formed sensors are not suitable for use in wafers that incorporate additional conversion and processing circuitry for the pressure measurements. As argued by Applicants' "because Fisher only teaches the use of capacitative pressure sensors that are separately fabricated, the resulting teaching of Fisher is that capacitive pressure sensors are not suitable for wafers that include other circuitry that assists in obtaining or processing the measured pressure information. Because Smesny teaches a circuit that employs such other circuitry, including a signal conditioning circuit and a processor, Fisher would only suggest, if anything, the use of integrally formed, non-capacitive sensors, and not separately fabricated capacitive sensors. "Therefore, there is no motivation, except impermissible hindsight, to combine the two references, and the claims at hand are allowable over the cited prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Art Unit: 2812

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander G. Ghyka whose telephone number is (571) 272-1669. The examiner can normally be reached on Monday through Thursday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John F Niebling can be reached on (571) 272-1679. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**AGG** 

February 17, 2004

ALEXANDER GHYKA PRIMARY EXAMINER

AU 2812 Ale Gra